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Part VII

Department of the Interior

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Final Rules

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Endangered Status for the Alabama Cave Shrimp, Palaemonias Alabamae

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines the Alabama cave shrimp, *Palaemonias alabamae*, to be an endangered species under the authority contained in the Endangered Species Act of 1973, as amended (Act). This obligate cave dweller has been found in only two caves, Shelta and Bobcat, in Madison County, Alabama. Groundwater contamination, low population levels, and collecting represent major threats to this small shrimp. The shrimp was not observed in Shelta Cave during the biweekly surveys of aquatic cave life over a twelve month period. In Bobcat Cave, only two or three shrimp have been observed on any single visit. This determination implements the protection of the Act for the Alabama cave shrimp.

EFFECTIVE DATE: October 7, 1988.

ADDRESS: The complete file for this rule is available for inspection by appointment during normal business hours at the Jackson, Mississippi, Field Office, U.S. Fish and Wildlife Service, Jackson Mall Office Center, Suite 316, 300 Woodrow Wilson Avenue, Jackson, Mississippi 39213.

FOR FURTHER INFORMATION CONTACT: Mr. James H. Stewart at the above address (601/965–4900, FTS 490–4900).

SUPPLEMENTARY INFORMATION:

Background

The Alabama cave shrimp, *Palaemonias alabamae*, is an albinistic cave shrimp known from only two caves in Madison County, Alabama, (J.E. Cooper, pers. comm.). This obligate cave shrimp was first collected in 1958 by Dr. Thomas Poulson and described in 1961 by A.E. Smalley from a series of 20 shrimp collected in Shelta Cave (Cooper 1975). The Alabama cave shrimp is colorless and largely transparent with a total length of up to 20 mm (0.8 in.) (Cooper 1975; Smalley 1961). The only other species of *Palaemonias* is the endangered Kentucky cave shrimp, *P. ganteri*, known only from Mammoth Cave, Kentucky. *Palaemonias alabamae* is very similar to *P. ganteri*, but is smaller in size, has a shorter rostrum, generally lacks ventral rostral spines and has fewer dorsal rostral spines (Smalley 1961).

A search of over 200 caves in north Alabama has failed to find the Alabama cave shrimp anywhere but at the two localities (J.E. Cooper, pers. comm.). The type locality, Shelta Cave, lies within the northwest limits of Huntsville, Alabama. It is located in Warsaw limestone of Mississippian age in the Interior Low Plateau (Cooper 1975). Shelta Cave consists of three large rooms with smaller alcoves. Water is present in all of the cave areas during wet periods of the year. Water levels fluctuate several feet during the year and some areas of the cave become seasonally dry. The two pit entrances to Shelta Cave are owned by the National Speleological Society and are gated to control activity in the cave. The only other known population is in Bobcat Cave, located on Redstone Arsenal, under the control of the U.S. Army.

The available information indicates the population in Shelta Cave has declined and may be extirpated. Over an 11-year period, Cooper and others collected or observed from one to 25 shrimp on each of 19 visits (Cooper 1975). On two of these visits the shrimp were not counted, but described as plentiful. During the period from December 1985 to April 1986, biologists made monthly trips to observe aquatic life in Shelta Cave but did not find any shrimp. In April 1986, a study to observe aquatic life in Shelta Cave twice a month for one year was initiated. No cave shrimp were observed in Shelta Cave during this period.

Threatened status was proposed for the Alabama cave shrimp on January 12, 1977 (42 FR 2507). That proposal was withdrawn on December 10, 1979 (44 FR 70796), for administrative reasons stemming from new listing requirements of the 1978 amendments to the Act. This species was proposed for endangered status on November 19, 1987 (52 FR 44578–44580).

Summary of Comments and Recommendations

In the November 19, 1987, proposed rule and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. A newspaper notice was published in The Birmingham News and in The Huntsville Times on December 13, 1987, and in The Huntsville News on December 14, 1987, which invited general public comment. Four comments were received. One Federal agency saw no impact to their program by the proposal. The proposal was supported by the other three commenters, including a Federal agency, the national conservation organization that owns Shelta Cave, and by a professional biologist. Two of these commenters provided additional data.

After a thorough review and consideration of all information available, the Service has determined that the Alabama cave shrimp (*Palaemonias alabamae*) should be classified as an endangered species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *eq seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the Alabama cave shrimp (*Palaemonias alabamae*) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The only known populations of Alabama cave shrimp occur in Shelta and Bobcat Caves. The only population trend data is discussed in the "Background" section. Groundwater contamination represents a major threat to this cave-dwelling species. Both caves are within the Huntsville Spring Branch and Indian Creek drainages, known areas of DDT contamination (Environmental Protection Agency 1986). They are not known to be in the direct path of the contaminated flow at the present time. In any area where sinkholes occur, however, surface pollutants can easily and rapidly enter the sub-surface aquifer.

B *Overutilization for commercial, recreational, scientific, or educational purposes.* Apparent low reproductive abilities, confined habitat, and inability to elude captors make the Alabama cave shrimp very susceptible to collecting. Cooper (1975) found only eight attached eggs on Alabama cave shrimp and indicated this species produced only one-third to one-half as many eggs as females of the endangered Kentucky cave shrimp. Other cave species are known to have extremely low reproductive rates compared to closely related surface species (Poulson 1961; Cooper 1975). As a result, any collection of adults can significantly affect population levels. There are few known collections of the Alabama cave shrimp, and these were made when the

species was apparently more common (see Background).

C. *Disease and Predation.* The Alabama cave shrimp occurs with the southern cavefish, *Typhlichthys subterraneus*, the cave salamander, *Gyrinophilus palleucus*, and the cave crayfish, *Aviticambarus jonesi* in one or both caves (Cooper 1975). It is probable that all three prey upon young cave shrimp (Barr and Kuehne 1971; Cooper 1975).

D. *The inadequacy of existing regulatory mechanisms.* The Alabama Department of Conservation and Natural Resources recognizes the Alabama cave shrimp as a "species of special concern" but does not provide any legal protection (Bouchard 1976). Shelta Cave is owned by the National Speleological Society and is currently gated to exclude unauthorized visitors. Bobcat Cave is owned by Redstone Arsenal and admittance is controlled. While admittance to the caves is restricted by the owners, adequate regulations do not exist to discourage collection of the species by those who are able to gain entrance to the caves.

E. *Other natural or manmade factors affecting its continued existence.* Its very small population levels and low reproductive capabilities are natural limitations to the ability of this species to recover from any adversity. Only two populations are known, and no shrimp have been observed in Shelta Cave despite twice monthly observations of the aquatic fauna for almost a year.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list the Alabama cave shrimp as an endangered species. Endangered status was chosen because the species has only been found in two caves and is in obvious decline in one of these caves. Therefore, the species requires the greatest possible protection under the Act. The reason critical habitat is not designated is discussed in the next section.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate any habitat of a species which is considered to be critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for this species at this time. As discussed under Factor B in the "Summary of Factors Affecting the Species", the Alabama cave shrimp is endangered by taking, an activity diffcult to prevent. Publication of critical habitat descriptions would make this species even more vulnerable and increase enforcement problems. All involved parties and land owners have been notified of the lcoation and importance of protecting this species' habitat. Protection of this species' habitat will be addressed through the recovery process and through the section 7 jeopardy standard. Therefore, it would not be prudent to determine critical habitat for the Alabama cave shrimp at this time.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. Examples of recovery actions that might be implemented include management agreements with Redstone Arsenal and cooperation with the National Speleological Society to protect existing populations of this shrimp, studies to understand the groundwater recharge patterns, and attempts to develop safeguards against potentially damaging contamination of groundwater entering the caves. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered for threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. If a Federal action may adversely affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

Federal involvement with this species is expected to be minimal. The continuing development of this region could lead to sub-surface water degradation that may involve the Environmental Protection Agency or other agencies with jurisdiction over groundwater. The Federal Housing Authority may be required to consult with the Service on Federal loans for housing development within the cave's recharge area. Development on Redstone Arsenal may require consultation with the U.S. Army.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship that would be suffered if such relief were not available.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

References Cited

Barr, T.C., Jr., and R.A. Kuehne. 1971. Ecological studies in the Mammoth Cave System of Kentucky II. The ecosystem. International Journal of Speleology 26(1):47–96.

Bouchard, R.W. 1976. Crayfishes and shrimps. pp. 14–20. *In:* H. Boschung (ed.).

Endangered and Threatened Plants and Animals of Alabama, Alabama Museum of Natural History Bulletin No. 2, 92 pp.

Cooper, J.E. 1975. Ecological and behavioral studies in Shelta Cave, Alabama, with emphasis on decapod crustaceans. Ph.D. Dissertation University of Michigan. University Microfilm International, Ann Arbor, Michigan 364 pp.

Environmental Protection Agency. 1986. Report on the remedial action to isolate DDT from people and the environment in the Huntsville Spring Branch-Indian Creek System Wheeler Reservoir, Alabama. EPA, Region IV, Atlanta, Georgia. 38 pp + appendices.

Poulson, T.L. 1961. Cave adaptations in Amblyopsid fishes. Ph.D. Dissertation University of Michigan. University Microfilm International, Ann Arbor, Michigan. 185 pp.

Smalley, A.E. 1961. A new cave shrimp from Southeastern United States (Decapod, Atyidae). Crustaceana III(2):127–130.

Author

The primary author of this final rule is James H. Stewart (see **ADDRESS** section) (601/965–4900, FTS 490–4900).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulation Promulgation

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

PART 17—[AMENDED]

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93–205, 87 Stat. 884; Pub. L. 94–359, 90 Stat. 911; Pub. L. 95–632, 92 Stat. 3751; Pub. L. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*); Pub. L. 99–625, 100 Stat. 3500 (1986), unless otherwise noted.

2. Amend § 17.11(h) by adding the following, in alphabetical order under "CRUSTACEANS", to the List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
CRUSTACEANS							
Shrimp, Alabama cave	*Palaemonias alabamae*	U.S.A. (AL)	NA	E	323	NA	NA

Dated: August 11, 1988.

Susan Recce,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 88–20297 Filed 9–6–88; 8:45 am]

BILLING CODE 4310–55–M

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Threatened Status for Marshallia mohrii

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines a plant, *Marshallia mohrii* (Mohr's Barbara's-buttons), to be a threatened species under the authority contained in the Endangered Species Act of 1973, as amended (Act). *Marshallia mohrii* is currently known from 13 sites in north Alabama (three counties) and one site in northwest Georgia. Five of these populations are confined to roadside rights-of-way and are threatened by routine maintenance practices or any future road expansion at these sites. Remaining populations are threatened by the potential conversion of their habitat for agricultural purposes. This action will extend the Act's protection to *Marshallia mohrii*.

EFFECTIVE DATE: October 7, 1988.

ADDRESSES: The complete file for this rule is available for public inspection, by appointment, during normal business hours at the Jackson Field Office, U.S. Fish and Wildlife Service, Jackson Mall Office Center, Suite 316, 300 Woodrow Wilson Avenue, Jackson, Mississippi 39213.

FOR FURTHER INFORMATION CONTACT: Ms. Cary Norquist at the above address (601/965–4900 or FTS 490–4900).

SUPPLEMENTARY INFORMATION:

Background

Marshallia mohrii, a member of the sunflower family, is an erect perennial herb, 3–7 decimeters (1–2.3 feet) tall, arising from a thickened crown or caudex. Leaves are alternate, firm-textured, 3-nerved, 8–20 centimeters (3.2–7.8 inches) long, lanceolate-ovate in shape and gradually reduced in size upwards. Flowers are produced in several heads and are pale pink to lavender in color. Flowering occurs from mid-May through June, with fruiting in July and August (Kral 1983, McDaniel 1981).

Marshallia mohrii morphologically resembles *M. grandiflora* and *M. trinervia* and may be an alloploid derivative (Watson and Estes 1987). *M. mohrii* is most similar to *M. grandiflora*, the main difference being that *M. grandiflora* usually has only a single flowering head as compared to the multi-headed inflorescence of *M. mohrii* (Watson pers. comm. 1988).

Marshallia mohrii typically occurs in moist prairie-like openings in woodlands and along shale-bedded streams. Other populations are located in swales on roadside rights-of-way (ROW). The soils are sandy clays, which are alkaline, high in organic matter and seasonally wet. Common associates include various grasses (*Andropogon, Panicum*), sedges (*Rhynchospora, Carex*) and prairie species including *Silphium confertifolium, Ruellia pinetorum, Allium cernuum, Physostegia*, and *Asclepias engelmanniana*. The surrounding forest type is mixed hardwoods with Shumard oak, willow oak and pine (Kral 1983, McDaniel 1981). The endangered *Clematis socialis* and *Sarracenia oreophila* occur with *Marshallia mohrii* at two separate sites. *Lysimachia graminea*, a candidate plant, is an associate of *Marshallia mohrii* at several sites in Alabama.

Marshallia mohrii was first collected by Mohr in Cullman County, Alabama in 1893 and later described by Beadle and Boynton (1901). Several collections of this species were made near Cullman around the turn of the century and one record during this time exists for Walker County, Alabama, and Lookout Mountain, Georgia (Channell 1955, 1957, McDaniel 1981). Only vague locality information exists with these specimens

and with the exception of Walker County, Alabama, no collections of this species have been made in these areas in recent times.

Kral's (1973) discovery of this species in Cherokee County, Alabama, in 1969, marked the first time this species had been observed since 1941. Extensive searches of suitable habitat in northeast Alabama and adjacent Georgia have been conducted. Currently, *Marshallia mohrii* is known to exist at only 1 site in Georgia (Floyd County) and 13 sites in Alabama, including 1 population in Bibb County (Watson pers. comm. 1986), 8 populations in Cherokee County, and 4 populations in Etowah County. Five relatively recent records of *Marshallia mohrii* in Alabama were not relocated during field searches in June of 1985 or 1986, including a collection from Bibb County (A. Sessler, Auburn University, pers. comm. 1986), two in Walker County (Whetstone 1979, Kral pers. comm. 1986), and two in Cherokee County (Whetstone pers. comm. 1987). Verbal reports of *Marshallia mohrii* in Murray and Bartow Counties, Georgia have not been confirmed (Kral pers. comm. 1987).

Five populations are confined to roadside ROW where the number of individuals range from 2 to 50. At the remaining nine sites, plants occur in more typical habitat; however, plants extend onto ROW swales at several areas. Populations appear to be concentrated primarily in two areas, eastern Etowah County and central Cherokee County, Alabama. Here, populations are within 0.5 mile to 2 miles of one another. The largest populations occur in Cherokee County, with an estimated 1000 plants at 2 sites. Three sites support limited populations (12–50 individuals) and 4 have moderate-sized populations (100–200 individuals).

Federal actions involving *Marshallia mohrii* began with section 12 of the Endangered Species Act of 1973, which directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct. This report, designated as House Document No. 94–51, was presented to Congress on January 9, 1975. On July 1, 1975, the Service published a notice in the **Federal Register** (40 FR 27823) of its acceptance of the report of the Smithsonian Institution as a petition within the context of section 4(c)(2), now section 4(b)(3)(a), of the Act and of its intention thereby to review the status of those plants. On June 16, 1976, the Service published a proposed rule in the **Federal Register** (41 FR 24523) to determine approximately 1,700 vascular plant species to be endangered species pursuant to section 4 of the Act. *Marshallia mohrii* was included in the Smithsonian petition and the 1976 proposal. General comments received in relation to the 1976 proposal were summarized in an April 26, 1978, **Federal Register** publication (43 FR 17909).

The Endangered Species Act Amendments of 1978 required that all proposals over 2 years old be withdrawn. A 1-year grace period was given to proposals already over 2 years old. In the December 10, 1979, **Federal Register** (44 FR 70796), the Service published a notice of withdrawal of the June 16, 1976, proposal, along with four other proposals that had expired. *Marshallia mohrii* was included as a category 1 species in a revised list of plants under review for threatened or endangered classification published in the December 15, 1980, **Federal Register** (45 FR 82480). Category 1 comprises taxa for which the Service presently has sufficient biological information to support their being proposed to be listed as endangered or threatened species. On November 28, 1983, the Service published a supplement to the Notice of Review for Native Plants in the **Federal Register** (48 FR 53640); the plant notice was again revised September 27, 1985 (50 FR 39526). *Marshallia mohrii* was included as a category 2 species in the 1983 supplement and the 1985 revised notice. Category 2 species are those for which listing as endangered or threatened species may be warranted but for which substantial data on biological vulnerability and threats are not currently known or on file to support a proposed rule. Extensive field searches by the author and others now support its reelevation to category 1 and listing as threatened. The data demonstrates a limited distribution and continuing threats to the species.

Section 4(b)(3) of the Endangered Species Act, as amended in 1982, requires the Secretary to make certain findings on pending petitions within 12 months of their receipt. Section 2(b)(1) of the 1982 Amendments further requires that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. This was the case of *Marshallia mohrii* because of the acceptance of the 1975 Smithsonian report as a petition. In October of 1983, 1984, 1985, 1986, and 1987, the Service found that the petitioned listing of *Marshallia mohrii* was warranted, but that listing this species was precluded due to other higher priority listing actions. On November 19, 1987, the Service published in the **Federal Register** (52 FR 44583), a proposal to list *Marshallia mohrii* as a threatened species. The Service now determines *Marshallia mohrii* to be a threatened species with the publication of this final rule.

Summary of Comments and Recommendations

In the November 19, 1987, proposed rule (52 FR 44583) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices inviting public comment were published in the *Rome News-Tribune*, Rome, Georgia, on December 10, 1987, and in the *Birmingham News*, Birmingham, Alabama, and the *Gadsden Times*, Gadsden, Alabama, on December 14, 1987.

A total of nine comments were received, including one from a Federal agency, three from State agencies, and five from individuals or groups. All were supportive. One individual provided additional biological information which has been incorporated into the appropriate section of the rule. Another individual expressed frustration over the lack of protection for plants under the Act. He also stated that habitat could not be protected without critical habitat designation. Critical habitat is not being designated for reasons outlined under the "Critical Habitat" section; habitat protection is provided through the section 7 jeopardy standard and the recovery process. His letter also discussed the role cultivation of plants can play in conservation, and his frustrations over Service policy (permit process) which he feels "* * * discourage the ex-situ preservation of * * * plants which have been artificially propagated." However, the cultivation of listed plants is usually encouraged and incorporated into subsequent recovery plans.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Marshallia mohrii* should be classified as a threatened species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act were

followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Marshallia mohrii* Beadle and Boynton (Mohr's Barbara's-buttons) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range. Marshallia mohrii* is endemic to the southern Appalachians of Alabama and Georgia where it is known to occur at 14 sites (see "Background" for specific locality information). Seven other historical sites have not been relocated and may have been destroyed. *Marshallia mohrii* is threatened by the potential destruction or adverse modification of its habitat. Many plants occur on roadside rights-of-way and are vulnerable to accidental disturbances. Any future road improvements (expansion) or roadside maintenance activities (i.e., herbicide treatment, bulldozing, planting of competitive grasses, mowing during flowering) at these sites, could adversely impact or destroy populations if proper planning does not occur. One such population in Cherokee County, Alabama, was destroyed by clearing for road construction. The Service will work in cooperation with the Alabama Highway Department in order to provide these sites with protection.

Plants on privately-owned sites are potentially threatened by the conversion of their habitat to improved pastureland through drainage, seeding with forage grasses or plowing and discing (Kral 1983, McDaniel 1981). Much of its suitable habitat has been converted to pastureland or row crops.

Marshallia mohrii maintains itself only in areas which were naturally or artificially cleared and probably are maintained naturally through occasional fire or local soil conditions that promote a grass-sedge community (Kral 1983). Mechanical disturbance of soil if unaccompanied by drainage might prepare openings for seeds to germinate (Kral 1983). Research into this aspect of the species' biology is needed in order to perpetuate appropriate habitat conditions.

B. *Overutilization for commercial, recreational, scientific, or educational purposes. Marshallia mohrii* is currently not a significant component of the commercial trade of native plants; however, the species has potential for horticultural use (McCartney pers. comm. 1987) and publicity from its listing could generate an increased demand. Taking and vandalism pose two risks to this species due to its visibility when in flower and accessibility of the sites.

C. *Disease or predation.* Although cattle will feed on *Marshallia mohrii* (Kral 1983), predation is not thought to be a significant threat to the species. *Marshallia mohrii* is not known to be threatened by disease.

D. *The inadequacy of existing regulatory mechanisms.* There are no State or Federal laws protecting *Marshallia mohrii* or its habitat. It is unofficially recognized as endangered in Alabama (Freeman 1984) and Georgia (T. Patrick, Georgia Natural Heritage Program, pers. comm. 1987). The Act would provide protection (see "Available Conservation Measures" below) and encourage active management for this species. Its listing would encourage its addition to the official list of endangered and threatened plants by the Georgia Department of Natural Resources, thereby affording it protection under the Wildflower Preservation Act of 1973. This legislation prohibits taking of plants from public land (without a permit) and regulates the sale and transport of plants within the State.

E. *Other natural or manmade factors affecting its continued existence. Marshallia mohrii* is vulnerable due to its limited distribution and small number of individuals at many of the sites. Its survival is dependent upon the maintenance of prairie-like openings (McDaniel 1981); therefore, woody succession poses an insidious threat to this species and its habitat.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list *Marshallia mohrii* as a threatened species. Threatened status seems appropriate since the populations are not imminently in danger of destruction; however, *Marshallia mohrii* is not currently protected by law and, if protective measures are not taken for this species, it could become endangered in the foreseeable future. Critical habitat is not being designated for the reasons discussed below.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate any habitat of a species which is considered to be critical habitat at the time the species is determined to be endangered or threatend. The Service finds that designation of critical habitat is not prudent for this species at this time. Publication of exact locations of *Marshallia mohrii* would increase public interest and possibly lead to additional threats to the species from collecting and vandalism (see Factor B in the "Summary of Factors" section). Furthermore, *Marshallia mohrii* would not be protected from taking under the Act since it does not occur on lands under Federal jurisdiction. No benefit can be identified through critical habitat designation that would outweigh these potential threats. The State agency (Alabama Highway Department) which has jurisdiction over some of this species' habitat has been notified of the plant's locations and has agreed to work with the Service to protect *Marshallia mohrii* on the rights-of-way. The involved private landowners will be informed of the location and importance of protecting this species' habitat. Protection of this species' habitat will be addressed through the recovery process and through the section 7 jeopardy standard. Therefore, it would not be prudent to determine critical habitat for this species at this time.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. If a Federal action may adversely affect a listed species or its critical habitat, the responsible Federal

agency must enter into formal consultation with the Service.

The only potential Federal involvement with *Marshallia mohrii* at this time would be Federal funds or other Federal involvement with the highway rights-of-way maintenance. Highway maintenance crews are working cooperatively with the Service to find rights-of-way maintenance techniques that are compatible with protecting *Marshallia mohrii*.

The Act and its implementing regulations found at 50 CFR 17.71 and 17.72 set forth a series of general trade prohibitions and exceptions that apply to all threatened plants. All trade prohibitions of Section 9(a)(2) of the Act, implemented by 50 CFR 17.71, would apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export any threatened plant, transport it in interstate or foreign commerce in the course of a commercial activity, sell or offer it for sale in interstate or foreign commerce, or remove it from areas under Federal jurisdiction and reduce it to possession. Seeds from cultivated specimens of threatened plant species are exempt from these prohibitions provided that a statement of "cultivated origin" appears on their containers. Certain exceptions can apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving threatened species under certain circumstances. It is anticipated that few trade permits would ever be sought or issued since the species is not common in cultivation or in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, P.O. Box 27329, Washington, DC 20038–7329 (202/343–4955).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

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Beadle, C.D., and P.E. Boynton. 1901. A revision of the species of *Marshallia*. Biltmore Botanical Studies 1:3–10.

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Author

The primary author of this final rule is Cary Norquist (see **ADDRESSES** section) (601/965–4900 or FTS 490–4900).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulation Promulgation

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

PART 17—[AMENDED]

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93–205, 87 Stat. 884; Pub. L. 94–359, 90 Stat. 911; Pub. L. 95–632, 92 Stat. 3751; Pub. L. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*); Pub. L. 99–625, 100 Stat. 3500 (1986), unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under Asteraceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Asteraceae—Aster family:						
Marshallia mohrii	Mohr's Barbara's button	U.S.A. (AL, GA)	T	324	NA	NA

Dated: August 11, 1988.

Susan Recce,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 88–20298 Filed 9–6–88; 8:45 am]

BILLING CODE 4310-55-M

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Agalinis acuta (Sandplain Gerardia) to be an Endangered Species

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines a plant, *Agalinis acuta* (sandplain gerardia) to be an endangered species, and thereby provides the species protection under the authority contained in the Endangered Species Act of 1973, as amended. This species is known to occur at two sites on Cape Cod, Massachusetts, six sites on Long Island, New York, and one site in Baltimore County, Maryland. Historically, it also occurred in Connecticut and Rhode Island, but is now believed extirpated in these States. The species is endangered by changing land use patterns, residential and commercial development, and encroachment of

woody vegetation. Historically, grazing by sheep and cattle and periodic burning of the coastal grasslands and pitch pine—scrub oak forests maintained large areas in early stages of succession. Sandy open areas free of dense competing vegetation are required for successful establishment and growth of *Agalinis acuta*. Changing land use patterns and residential development, which now necessitate the suppression of fires, have significantly altered and reduced the species' required habitat. Areas subjected to periodic disturbance, such as roadside rights-of-way, airport perimeters, power lines, etc., offer the best hope of finding as yet undiscovered populations. Due to the sensitivity and vulnerability of the few known populations, critical habitat is not being determined.

EFFECTIVE DATE: The effective date of this rule is October 7, 1988.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, One Gateway Center, Suite 700, Newton Corner, Massachusetts 02158.

FOR FURTHER INFORMATION CONTACT: Anne Hecht at the above address (617–965–5100 or FTS 829–9316).

SUPPLEMENTARY INFORMATION:

Background

The sandplain gerardia is a plant of the snapdragon family (Scrophulariaceae) found at nine locations in Massachusetts, New York, and Maryland. The plant is an annual light-green herb from 4 to 8 inches (1 to 2 decimeters) and occasionally up to 16 inches (four decimeters) tall. The stem is weakly angular and has few branches. The leaves are opposite, linear, and up to 1 inch (2.5 centimeters) long. The pink-purple, bell-shaped flowers appear from late August through September, are 0.4–0.5 inches (1 to 1.3 centimeters) long, and have two yellow lines and red or purple spots in the corolla throat. The corolla lobes are slightly notched at the tip. The species grows in dry, sandy, open areas.

The plant has a very restricted distribution due to its dependence on the periodic disturbance of its specialized and limited habitat. Most collection records for *Agalinis acuta* date back to the late 1800's and early 1900's. Historically, the plant was known from Cape Cod and Nantucket Island to western Long Island, inland to western Middlesex and Worcester Counties in Massachusetts and Hartford County in Connecticut. Recent collections of the species in Baltimore County, Maryland represent the southern limit of its distribution.

The most significant threat to the species has been the continuing loss of grassland habitat along the coastal plain of southern New England, western Long Island, and the offshore islands of Nantucket and Martha's Vineyard. Residential, commercial and recreational development with ancillary developments such as shopping facilities, expanding roadways, etc., have rapidly increased in this region in the last 25–30 years.

From the turn of the century to the early 1940's, the species was known to have occurred in at least 24 towns and occasionally at several sites within a given town. Intensive field searches for the species during the last few years have resulted in location of only nine existing populations. Year-round residential developments, summer cottages, and marinas now mark historical locations of the plant. The secondary impacts of this increased urbanization, however, have also had a severe impact on the species' remaining habitat. *Agalinis acuta* appears to require periodic disturbance of its habitat to maintain the required sandy open areas free of dense competing vegetation. Historically, the grazing of sheep and cattle throughout the region helped maintain the grasslands or "moors." Extensive fires, often set intentionally, also helped perpetuate the grassland and suppress dense scrub oak and pitch pine forests. Agricultural use of the area has changed, however, and urbanization now requires prompt fire suppression. Dense woody vegetation has encroached on many historical sites for the plant. It is probably not by coincidence that the two extant populations on Cape Cod occur on the periphery of old cemeteries, where caretaking activities have helped maintain conditions favorable to *A. acuta*.

The six known populations on Long Island are also seriously threatened by expanding urbanization and industrial development. The plant was once known from six sites in Rhode Island, but has not been reported there since 1941 and is believed to be extirpated from the State (pers. comm. R. Enser, Rhode Island Natural Heritage Program, 1985). The last Connecticut record for the species was in the 1930's, and it is also believed extirpated there (Mehrhoff 1978).

Agalinas acuta was first recommended for Federal listing as a threatened species by the Smithsonian Institution in its December 15, 1974 report to Congress, "Report on Endangered and Threatened Plant Species of the United States." On July 1, 1975, the Service published in the **Federal Register** (40 FR 27823–27924) a Notice of Review of its acceptance of the Smithsonian report as a petition within the context of section 4(b)(2) of the Act (petition acceptance is now covered by section 4(b)(3) of the Act, as amended). The sandplain gerardia was recognized as a Category 2 candidate in the Service's **Federal Register** notice of December 15, 1980 (45 FR 82480). Category 2 candidates are defined as taxa for which existing information indicates the possible appropriateness of proposing to list as endangered or threatened, but for which sufficient information is not presently available to biologically support a proposed rule.

In the past seven years, intensive field investigations to more thoroughly assess the species' status in southern New England and New York have been undertaken by State natural resource agencies, The Nature Conservancy, private conservation groups and professional and amateur botanists. As a result of this work, *Agalinis acuta* was included in Category 1 of the Service's November 28, 1983 supplement (48 FR 53639) to the 1980 notice and a revised notice of September 27, 1985 (50 FR 39526). Category 1 taxa are defined as species for which sufficient information is on file to support the biological appropriateness for proposing to list. The presence of one population of this species in Baltimore County, Maryland was later brought to the Service's attention. Preliminary information regarding this southernmost population was provided by the Maryland Natural Heritage Program.

The Endangered Species Act Amendments of 1982 required that all petitions pending as of October 13, 1982 be treated as having been newly submitted on that date. The deadline for a finding on those petitions, including the one for *A. acuta*, was October 13, 1983. On October 13, 1983, October 12, 1984, October 11, 1985, and again on October 10, 1986, the petition finding was made that listing *Agalinis acuta* was warranted but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act. Recycling of the petition, pursuant to section 4(b)(3)(c)(i) of the Act, resulted in a finding deadline of October 10, 1987. A proposed rule finding that the petitioned action was warranted, and proposing to implement the action in accordance with section 4(b)(3)(B)(ii) of the Act was published on November 19, 1987 (52 FR 44450–44453).

Summary of Comments and Recommendations

In the November 19, 1987 proposed rule, all interested parties were requested to submit factual information that might contribute to the development of a final rule. Appropriate State resource agencies in the species' range, county governments, scientific organizations, and other interested groups were contacted and requested to comment. Notices inviting public comment were published in several newspapers. Written comments were received from four parties during the public comment period. All letters supported the proposed listing. One commenter advised of additional populations on Long Island; another recommended a cooperative study among the three States with extant populations. Maryland Department of Natural Resources advised that they have listed *Aqalinis acuta* as a State endangered species, and New York State Department of Environmental Conservation hopes to do so by June 1988. All commenters expressed willingness with the Service in recovery efforts.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (50 CFR Part 424) set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Aqalinis acuta* Pennell (sandplain gerardia) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The most significant threat to *Aqalinis acuta* is the direct loss or alteration of its coastal grasslands habitats. The plant is found in open sandy grasslands of southern New England and Long Island and is one of several rare species associated with the "coastal prairie" habitat type (Crow 1982). Six other plants considered by the State of Massachusetts Natural Heritage Program as being rare and threatened occur on sandplain grasslands (Coddington and Field 1978). Fifteen rare species listed by the New York Heritage program co-occur with *A. acuta* on one or more of the Long Island sites (pers. comm. S. Clements, New York Natural Heritage Program, 1988), while two candidates for Federal listing are found on the Maryland site (pers. comm. D.E. MacLauchlan, Maryland Dept. of Natural Resources, 1987). Another candidate for Federal listing, the regal fritillary butterfly (*Speyeria idalia*), is also associated with the coastal grasslands habitat.

Land use practices have changed significantly throughout much of the coastal plain region since the turn of the century. During the early 1800's, extensive areas of the coastal grasslands were used as "commonlands" for pasturing of sheep and cattle. Individual farms and private landholdings became established during the mid 1800's, but grazing and tilling for agricultural crops were still predominant. The late 1800's saw a decline in agriculture; however, the hunting of shorebirds became an important activity on the abandoned fields. Through the early 1920's, extensive areas of the "moorlands" were burned intentionally in late summer to attract feeding birds to the cooked fruits of heathland plants.

The grazing and burning of the grasslands through the mid 1900's was an important factor in maintaining the coastal plain ecosystem. These periodic disturbances were also essential to maintaining sandy areas critical to the existence of *Aqalinis acuta*. Intensive agricultural use of the grasslands today has greatly diminished and fires are accidental, infrequent, and quickly suppressed. Residential homes, summer cottages, and commercial developments have claimed many areas where *Aqalinis acuta* formerly occurred. The suppression of fires has also allowed woody vegetation to encroach upon the open grasslands, further reducing available suitable habitat for the growth and reproduction of *Aqalinis acuta*.

The one population of this species in Maryland occurs at Soldier's Delight, an area of unusual vegetation on serpentine-derived soil. It is a State Natural Environmental Area.

B. *Overutilization for commercial, recreational, scientific or educational purposes.* Although historical collections were made at many sites on Cape Cod and the islands of Nantucket and Martha's Vineyard, scientific collecting does not appear to have been a major cause of the species' decline. However, because only nine populations, all located in easily accessible sites, are now known to occur, the species could be threatened by exploitation for educational or scientific purposes in the future.

C. *Disease or predation.* One of the *A. acuta* populations on Long Island, New York appears to be heavily browsed by rabbits and/or deer. It is not known, however, if the effect is deleterious or beneficial since wildlife may act as seed dispersal agents or browse competing vegetation (Zaremba 1983).

D. *The inadequacy of existing regulatory mechanisms.* Maryland has listed *Agalinis acuta* as an endangered species; as such, it is afforded some protection from taking without the permission of the landowner and from trade. Massachusetts officially lists *Agalinis acuta* as endangered, but the listing serves only to recognize the plant's rarity and provides it no legal protection. New York State Department of Environmental Conservation has stated its intention to include the species on a State list of rare plants currently in preparation. None of these existing or proposed State listings protects plants from the habitat modification (described under factor A, above) which poses the major threat to this species.

All States with extant and historical populations of *Agalinis acuta* have cooperative plant agreements as specified under section 6(c)(2) of the Endangered Species Act. Section 6 cooperative agreements between the appropriate State agencies and the Service provide opportunities to carry out further conservation programs on behalf of listed species. Listing under the Endangered Species Act will therefore provide further protection for this species.

E. *Other natural or manmade factors affecting its continued existence.* Although it is known that the sandplain gerardia is an annual plant and requires open sandy areas for successful germination and growth, other aspects of the species' biology are not well understood. The small number and size of existing populations are causes for concern, as natural factors or chance adverse event could have serious impacts on the species' continued existence. Natural successional changes, random destructive events that might severely alter the species' habitats, or any failure in reproduction resulting in genetic depletion could be catastrophic.

The Service has carefully assessed the best scientific information available regarding the past, present and future threats faced by this species in determining to finalize this rule. Based on this evaluation, the preferred action is to list *Agalinis acuta* as endangered. Due to the encroachment of woody vegetation on coastal grasslands and rapid residential and commercial development, the few remaining populations are particularly vulnerable and in need of protection. Critical

habitat is not being designated for the reasons outlined below.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate any habitat of a species which is considered to be critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for this species at this time. The Service believes that publication of specific areas in which *Agalinis acuta* occurs would likely subject the species to increased disturbance by curiosity seekers and vandals. These potential threats are of particular significance since the sites are easily accessible, and increased public access would be difficult to control under existing authorities. Consequently, no critical habitat is determined for this species.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal and State agencies, private conservation organizations and individuals. The Nature Conservancy has already made significant contributions to conserving the species by contacting the owners of land containing known populations in Massachusetts and New York and encouraging them to assist in protecting the sites. Additional recovery measures might include maintaining coastal plain grassland vegetation by controlling the encroachment of woody species and reintroducing the species into areas of historical habitat from which it is now extirpated. Other conservation measures, including required protection efforts by Federal agencies and prohibitions against collecting are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened, and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible agency must enter into formal consultation with the Service. The Federal Aviation Administration (FAA) reports that it may declare land it owns on which this species is found to be excess property. The FAA has been advised as to its responsibilities under section 7 and has expressed no concerns regarding anticipated conflicts due to the listing.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plant species. With certain exceptions, these prohibitions make it illegal for any person subject to the jurisdiction of the United States to import or export any endangered species of plant, transport it in interstate or foreign commerce in the course of a commercial activity, sell it or offer it for sale in interstate or foreign commerce, or remove it from an area under Federal jurisdiction and reduce it to possession. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered species under certain circumstances. There is no known commercial trade in *Agalinis acuta* and the Service therefore anticipates few, if any, requests for such permits. Requests for copies of the regulations on plant and inquiries regarding them may be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, Washington, DC 20240 (703/235–1903).

National Environmental Policy Act

The Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

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Church, G.L. and R.L. Champlin. 1978. Rare and endangered vascular plant species in Rhode Island. U.S. Fish and Wildlife Service, Region 5, Newton Corner, Massachusetts.

Coddington, J. and K.G. Field. 1978. Status Report: *Agalinis acuta* in Massachusetts. U.S. Fish and Wildlife Service, Region 5, Newton Corner, Massachusetts, 5 pp. Unpublished report.

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Mehrhoff, L.F. 1978. Rare and endangered vascular plant species in Connecticut. U.S. Fish and Wildlife Service, Region 5, Newton Corner, Massachusetts.

Zaremba, R.E. 1984. Site survey summary. New York Heritage Program. Unpublished report.

Authors

The primary authors of this final rule are Paul R. Nickerson and Anne Hecht (see **ADDRESSES** section).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulation Promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations is amended as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93–205, 87 Stat. 884; Pub. L. 94–359, 90 Stat. 911; Pub. L. 95–632, 92 Stat. 3751; Pub. L. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*); Pub. L. 99–625, 100 Stat. 3500 (1986), unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under the family Scrophulariaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

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(h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Scrophulariaceae—Snapdragon Family:						
* * * * *				*		
Agalinis acuta	Sanplain gerardia	U.S.A. (CT, MA, MD, NY, RI)	E	325	NA	NA
* * * * *				*		

Dated: August 11, 1988.

Susan Recce,

Acting Assistant Secrtary for Fish and Wildlife and Parks.

[FR Doc. 88–20299 Filed 9–6–88; 8:45 am]

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